Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Unlicensed Operation in the TV Broadcast Bands	)	ET Docket No. 04-186
	)	

COMMENTS OF THE
NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION, INC. ON THE
REPORT ON DTV RECEIVER INTERFERENCE REJECTION CAPABILITIES

The National Cable & Telecommunications Association ("NCTA"), by its attorneys, submits the following comments in the above-captioned proceeding. NCTA is the principal trade association of the cable television industry. Its members provide video programming, broadband Internet, wireline phone, and other services throughout the United States. NCTA also represents programmers and suppliers of equipment to the cable television industry.

On March 30, 2007, the FCC's Office of Engineering and Technology released a report on the results of its laboratory tests quantifying certain aspects of the interference rejection capabilities of DTV receivers as part of its ongoing proceeding to permit the operation of new low power devices in the broadcast television spectrum. The Commission's Laboratory measurements were limited to the out-of-channel interference rejection performance of a representative sample of eight DTV receivers with fifth generation tuners. The information from these tests will be used to analyze the potential for interference to DTV broadcasts from out-of-band signals.

As the Public Notice points out, however, "this information is only one element of many that must be examined in evaluating the possibilities for operation of new low power devices in unused portions of the TV broadcast bands."[1] Indeed, as we and other parties on all sides of the issue have made clear, comprehensive lab and field testing is necessary to ensure that only those devices that can coexist with authorized services without causing harmful interference are approved. The interference rejection tests conducted by the Commission's Laboratory to date and examined in the report do not address the core issue for the cable industry: the shielding effectiveness of television receivers vis-a-vis their ability to tolerate *direct pickup interference* as a function of frequency. As fully discussed in our comments in this proceeding, this type of interference has a significant adverse impact on consumer television sets and their reception of cable service.

Pursuant to the 1992 Cable Act, a representative sample of television receivers was tested by Carl T. Jones at the behest of the NCTA/EIA Joint Engineering Committee (JEC) and under the auspices of Cable Television Laboratories, Inc. in the cable-consumer electronics compatibility proceeding. In analyzing shielding effectiveness as a function of the selected signal frequency, the tests showed that the higher the frequency in the TV band, the more effective the shielding. And the tests showed that television receivers provided *very poor* shielding protection, particularly at the low VHF channels. Overall, the tests documented that TV receivers are highly susceptible to interference from signals emanating from devices operating in close proximity to such equipment. In light of this evidence, NCTA urged the Commission to conduct studies of television receiver shielding and DPU interference.

[1] Public Notice, ET Docket No. 04-186, DA 07-1564, rel. March 30, 2007

We continue to urge DPU testing, but if the Commission is not going to undertake such tests in this proceeding, we submit that the Carl T. Jones report is the definitive study for these purposes. There is no evidence in the record to refute its analysis and nothing to substantiate claims of improved shielding in television receivers. Moreover, the Laboratory's report shows that no receiver appeared to fully achieve the ATSC recommended guidelines for interference rejection performance – guidelines that are less stringent than the receiver performance assumptions on which current DTV interference protection criteria are based.[2]

NCTA's technical analysis on the potential adverse effects of unlicensed TV band devices on reception of cable service is based on the assumption that receivers fully meet the ATSC recommended guidelines.[3] And even using those assumptions, the analysis showed that consumer television receivers were vulnerable to significant direct pickup interference. If DTV receivers are not meeting the ATSC recommended guidelines, as demonstrated by the FCC tests conducted to date, it is even more critical that the Commission further evaluate this issue.

In sum, the high probability of both near-field interference to television receivers and fringe-area headend reception interference calls for the adoption of appropriate technical and operational rules. The minimum technical parameters to protect against interference to cable operations include capping the power output of personal/portable devices at 10 – 20 mW and prohibiting their operation on VHF channels, particularly low-VHF channels; restricting operation of fixed devices to at least 400 feet from external walls of residential buildings and

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[2] The ATSC provides recommended guidelines for DTV receiver performance in its document, "ATSC Recommended Practice: Receiver Performance Guidelines", ATSC Doc. A/74, 17 June 2004.

[3] *See* "The Potential Adverse Effects of Unlicensed Operation of New Devices in TV Broadcast Bands on Cable Customers' Reception of Cable Service," David Large Consultants, Inc., filed with NCTA's Comments in ET Docket No. 04-186, ET Docket No. 02-380, Jan. 31, 2007.

prohibit operation on VHF channels; and requiring spectrum coordination along with detection methodologies.

Respectfully submitted,

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